



Austin Leads the Nation on Zero Energy Homes

Background

The Zero Energy Capable Homes Task Force was created by the City Council and met from September 2006 through June 2007. Its members included the Home Builders Association of Greater Austin, HVAC contractor associations, affordable housing providers, energy efficiency advocates, members of the Electric Utility Commission and the Resource Management Commission, Texas Gas Service and City staff.

This collaboration between private and public sector stakeholders represents an exceptional model for code development in Austin – a community approach where environmental and consumer advocates, industry and the City worked together to create policies that will dramatically reduce energy costs for home owners, enhance affordability and take decisive action to improve air quality and combat global warming.

Through a collaborative effort, the task force created an action plan to make all new single-family construction in Austin zero energy capable by 2015 – making Austin the leading city in the nation for home energy efficiency.

What is a Zero Energy Home?

A Zero Energy Capable Home is one that is energy efficient enough that, with the addition of on-site power generation such as solar panels, it can produce as much energy as it consumes in a year. Practically speaking, this means new homes will be about 65% more efficient in 2015 than homes built today. Home owners who choose to do so will be able to get the 35% balance – increasing efficiency by 100% – through the use of solar power or other strategies. The increase in efficiency applies to *all* energy, both electric and gas.

What is the City Council doing today?

Today the Council will consider two items:

1) Formal adoption of the Zero Energy Capable Homes Task Force Report. The task force report:

- Makes recommendations to Council on changes to 2006 COA Energy Code – these code changes, to be considered by Council today, will increase efficiency by 11%
- Sets goals for energy efficiency improvements for the code cycles in 2009, 2012, and 2015 – ultimately reaching the Zero Energy Capable mark at 2015
- Provides a cost/benefit analysis for the code changes through 2015, and provides a roadmap for future amendment cycles and implementation strategies

2) Public hearing and adoption of improvements to the Energy Code. The COA Energy Code amendments to be adopted today include:

- Testing the building shell to ensure that homes are built tight
- Testing air conditioning ducts to ensure they don't leak more than 10%
- Testing the air flow of air conditioners to ensure cool air gets where it's supposed to go
- Requiring a Radiant Barrier System to stop radiant heat before it penetrates the home
- Requiring that 25% of home lighting be high-efficiency lighting

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Zero Energy Homes

- The code changes up for Council action today focus on the biggest energy user in Austin homes: air conditioning.
- The changes will reduce electric energy consumption by 19% – or about 2515 kWh per year on a typical new home. They will reduce overall energy consumption, including both gas and electric, by 11%.
- The efficiency improvements will add a little more than \$1,000 to the cost of a typical new home, but the savings on utility bills will exceed the additional mortgage costs – increasing housing affordability and putting money in the pockets of home owners from Day 1.
- Assuming about 6,400 homes are built in the Austin next year, those homes will:
 - Save 160,960 megawatt hours over the next ten years
 - This will reduce carbon dioxide emissions by 104,121 tons
 - The equivalent carbon reduction ability of 178,477 acres of forest
 - Or removing 22,814 cars from the road
 - Saving the owners of these homes more than \$14 million over ten years
- Future code-adoption cycles will reduce energy consumption even further. Targets include efficiency improvements of:
 - 19% in 2009
 - 18% in 2012
 - 17% in 2015
- Between 2008 and 2018 these code changes will:
 - Reduce energy consumption in homes by 1,391,066 megawatt hours
 - Reduce carbon dioxide emissions by 905,841 tons
 - The equivalent carbon reduction ability of 1,542,450 acres of forest
 - Or removing 197,163 cars from the road.
 - Saving home owners \$123,804,838

Additional Resources:

Austin Energy Residential Efficiency Programs:

<http://www.austinenergy.com/Energy%20Efficiency/resIndex.htm>

U.S. Energy Information Administration (Dept. of Energy), Homes and Buildings Page:

<http://www.eia.doe.gov/emeu/consumption/index.html>

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